

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A method for preparing a suspension of a pharmaceutically-active compound, the solubility of which is greater in a water-miscible first organic solvent than in a second solvent which is aqueous, the process comprising the steps of:

- (i) dissolving a first quantity of the pharmaceutically-active compound in the water-miscible first organic solvent to form a first solution;
- (ii) mixing the first solution with the second solvent to precipitate the pharmaceutically-active compound to create a pre-suspension of particles; and
- (iii) seeding the first solution or the second solvent prior to the mixing step or seeding the pre-suspension after the mixing step; and
- (iv) subjecting the pre-suspension to high energy agitation by homogenization, counter-current flow homogenization, or microfluidization.

Claim 2 (original): The method of claim 1 wherein the step of precipitating the pharmaceutically-active compound comprises the step of precipitating the compound in a form selected from the group consisting of a supercooled liquid, an amorphous particle, a semicrystalline particle and a crystalline particle.

Claim 3 (original): The method of claim 2 further comprising the step of adding energy to the pre-suspension.

Claim 4 (currently amended): The method of claim 3 wherein the ~~energy-addition step~~ comprises the step of subjecting the pre-suspension to high energy agitation ~~particles are non-spherical.~~

Claim 5 (previously presented): The method of claim 3 wherein the energy-addition step comprises the step of adding heat to the pre-suspension.

Claim 6 (currently amended): The method of ~~claim 3~~ claim 1 wherein the energy-addition step comprises the step of exposing the pre-suspension to electromagnetic energy.

Claim 7 (original): The method of claim 6 wherein the step of exposing the pre-suspension to electromagnetic energy comprises the step of exposing the pre-suspension to a laser beam.

Claim 8 (original): The method of claim 1 further comprising the step of forming a desired polymorph of the pharmaceutically active compound.

Claim 9 (original): The method of claim 8 wherein the step of seeding comprises the step of using a seed compound.

Claim 10 (original): The method of claim 9 wherein the seed compound is the desired polymorph of the pharmaceutically-active compound.

Claim 11 (original): The method of claim 9 wherein the seed compound is a compound other than the desired polymorph of the pharmaceutically-active compound.

Claim 12 (original): The method of claim 11 wherein the seed compound is selected from the group consisting of: an inert impurity; and an organic compound with a structure similar to that of the desired polymorph.

Claim 13 (original): The method of claim 9 wherein the seed compound is added to the first solution.

Claim 14 (original): The method of claim 9 wherein the seed compound is added to the second solvent.

Claim 15 (original): The method of claim 9 wherein the seed compound is added to the pre-suspension.

Claim 16 (original): The method of claim 8 wherein the step of forming a desired polymorph comprises the step of forming a seed compound in the first solution.

Claim 17 (original): The method of claim 16 wherein the step of forming the seed compound in the first solution comprises the step of adding the pharmaceutically-active

compound in sufficient quantity to exceed the solubility of the pharmaceutically-active compound in the first solvent to create a supersaturated solution.

Claim 18 (original): The method of claim 17 wherein the step of forming the seed compound in the first solution further comprises the step of treating the supersaturated solution.

Claim 19 (original): The method of claim 18 wherein the step of treating the supersaturated solution comprises the step of aging the supersaturated solution.

Claim 20 (original): The method of claim 1 wherein the seeding step comprises the step of using electromagnetic energy.

Claim 21 (original): The method of claim 20 wherein the electromagnetic energy is dynamic electromagnetic energy.

Claim 22 (original): The method of claim 20 wherein the electromagnetic energy is a laser beam.

Claim 23 (original): The method of claim 20 wherein the electromagnetic energy is radiation.

Claim 24 (original): The method of claim 1 wherein the step of seeding comprises the step of using a particle beam.

Claim 25 (original): The method of claim 1 wherein the step of seeding comprises the step of using an electron beam.

Claim 26 (original): The method of claim 1 wherein the step of seeding comprises using ultrasound.

Claim 27 (original): The method of claim 1 wherein the step of seeding comprises using a static electrical field.

Claim 28 (original): The method of claim 1 wherein the step of seeding comprises using a static magnetic field.

Claim 29 (original): The method of claim 1 further comprising the steps of forming particles having an average effective particle size less than about 2 μ m.

Claim 30 (currently amended): A method for preparing a suspension of a pharmaceutically-active compound, the solubility of which is greater in a water-miscible first organic solvent than in a second solvent which is aqueous, the process comprising the steps of:

(i) dissolving a first quantity of the pharmaceutically-active compound in the water-miscible first organic solvent to form a first solution;

(ii) mixing the first solution with the second solvent to precipitate the pharmaceutically-active compound to create a pre-suspension of particles; and

(iii) providing a seed compound to the first solution or the second solvent or the pre-suspension; and

(iv) subjecting the pre-suspension to high energy agitation by homogenization, counter-current flow homogenization, or microfluidization.

Claim 31 (original): The method of claim 30 further comprising the step of adding energy to the pre-suspension to provide particles having an average effective particle size of less than about 2 μ m.

Claim 32 (original): The method of claim 30 further comprising the step of forming a desired polymorph of the pharmaceutically active compound.

Claim 33 (original): The method of claim 32 wherein the step of seeding comprises the step of providing a seed compound.

Claim 34 (original): The method of claim 33 wherein the seed compound is the desired polymorph of the pharmaceutically-active compound.

Claim 35 (original): The method of claim 33 wherein the seed compound is a compound other than the desired polymorph of the pharmaceutically-active compound.

Claim 36 (original): The method of claim 35 wherein the seed compound is selected from the group consisting of: an inert impurity; and an organic compound with a structure similar to that of the desired polymorph.

Claim 37 (original): The method of claim 33 wherein the seed compound is added to the first solution.

Claim 38 (original): The method of claim 33 wherein the seed compound is added to the second solvent.

Claim 39 (original): The method of claim 33 wherein the seed compound is added to the pre-suspension.

Claim 40 (original): The method of claim 32 wherein the step of forming a desired polymorph comprises the step of forming a seed compound in the first solution.

Claim 41 (original): The method of claim 40 wherein the step of forming the seed compound in the first solution comprises the step of adding the pharmaceutically-active compound in sufficient quantity to exceed the solubility of the pharmaceutically-active compound in the first solvent to create a supersaturated solution.

Claim 42 (original): The method of claim 41 wherein the step of forming the seed compound in the first solution further comprises the step of treating the supersaturated solution.

Claim 43 (original): The method of claim 41 wherein the step of treating the supersaturated solution comprises the step of aging the supersaturated solution.

Claim 44 (currently amended): A method for preparing a suspension of a pharmaceutically-active compound, the solubility of which is greater in a water-miscible first organic solvent than in a second solvent which is aqueous, the process comprising the steps of:

(i) adding a quantity of the pharmaceutically-active compound to the first organic solvent to create a supersaturated solution;

(ii) aging the supersaturated solution to form detectable crystals to create a seeding mixture of particles; and

(iii) mixing the seeding mixture with the second solvent to precipitate the pharmaceutically-active compound to create a pre-suspension; and

(iv) subjecting the pre-suspension to high energy agitation by homogenization, counter-current flow homogenization, or microfluidization.

Claim 45 (original): The method of claim 44 wherein the pharmaceutically-active compound of the pre-suspension is in a form selected from the group consisting of a supercooled liquid, an amorphous particle, a semicrystalline particle and a crystalline particle.

Claim 46 (original): The method of claim 45 further comprising the step of converting the compound in the pre-suspension to a desired polymorph.

Claims 47-48 (canceled).

Claim 49 (currently amended): The method of ~~claim 47~~ claim 44 wherein the energy-addition step further comprises the step of adding heat to the pre-suspension.

Claim 50 (currently amended): The method of ~~claim 47~~ claim 44 wherein the energy-addition step further comprises the step of exposing the pre-suspension to electromagnetic energy.

Claim 51 (original): The method of claim 47 wherein the step of exposing the pre-suspension to electromagnetic energy comprises the step of exposing the pre-suspension to a laser beam.

Claim 52 (original): The method of claim 44 further comprising the steps of: adding energy to the pre-suspension to form particles having an average effective particle size of less than about 2 μ m.

Claim 53 (currently amended): A method for preparing a suspension of a pharmaceutically-active compound, the solubility of which is greater in a water-miscible first organic solvent than in a second solvent which is aqueous, the process comprising the steps of:

(i) adding a quantity of the pharmaceutically-active compound to the first organic solvent to create a supersaturated solution;

- (ii) treating the supersaturated solution to form a detectable crystal to create a seeding mixture of particles; and
- (iii) mixing the seeding mixture with the second solvent to precipitate the pharmaceutically-active compound; and
- (iv) subjecting the pre-suspension to high energy agitation by homogenization, counter-current flow homogenization, or microfluidization.

Claim 54 (original): The method of claim 53, wherein the treating step comprises aging.

Claim 55 (original): The method of claim 53, wherein the treating step comprises adding a surfactant.

Claim 56 (original): The method of claim 53, wherein the treating step comprises adding a crystallization modifier.

Claim 57 (previously presented): The method of claim 53, wherein the treating step comprises reducing the temperature.

Claim 58 (original): The method of claim 53, wherein the treating step comprises using a laser beam.

Claim 59 (original): The method of claim 53, wherein the treating step comprises using radiation.

Claim 60 (original): The method of claim 53, wherein the treating step comprises using a particle beam.

Claim 61 (original): The method of claim 53, wherein the treating step comprises using an electron beam.

Claim 62 (original): The method of claim 53 wherein the treating step comprises using ultrasound.

Claim 63 (original): The method of claim 53 wherein the treating step comprises using a static electrical field.

Claim 64 (original): The method of claim 53, wherein the treating step comprises using a static magnetic field.

Claims 65-66 (canceled).